Date: User: Job Number This Issue Prsht Rev. First Issue Previous Run Written By Checked & Approved By Comment

Wednesday, 6/6/2007 3:45:44 PM

Kim Johnston

Process Sheet

: CU-DAR001 Dart Helicopters Services Customer

: 32837 : 10278 **Estimate Number**

P.O. Number :NIA

: 6/6/2007

S.O. No. : NA

: Est Rev: Fick: A 04.02.18

Type

: NA : 31727

: MACHINED PARTS

Drawing Number Project Number **Drawing Revision**

Part Number

Drawing Name

Material

Due Date

: D3121141

· D3121 REV D

: BRACKET ASSEMBLY

: N/A : D

: 6/30/2007

Additional Product

Job Number:



Seq. #:

Machine Or Operation:

Description:

1.0

M174B1000X02000

17-4 SS Bar

Comment: Qty.:

0.5775 f(s)/Unit

Total:

4.6200 f(s)

New issue KJ/DS

Material: 17-4 SS Bar per AMS 5604/5643

(M17-4-B1.000x02.000) Identify for D3121-111

2.0

Comment: BAND SAW

Cut blanks: (1.000" x 2.000") 6.600" long

3.0

HAAS CNC VERTICAL MACHINING #1



Comment: HAAS CNC VERTICAL MACHINING #1

1-Machine D3121-111 as per Folio FA361 and Dwg D3121Identify as D3121-111

2-Deburr

3-Scribe batch number

4.0

QC2

INSPECT PARTS AS THEY COME OFF MACHIN



Comment: INSPECT PARTS AS THEY COME OFF MACHINE



Dart Aerospace Ltd

W/O:		WORK ORDER CHA	WORK ORDER CHANGES				
DATE	STEP	PROCEDURE CHANGE	Ву	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
Part No	o:	PAR #: Fault Category:	NCR: Yes	No) DQ	A: 🎵	Date: <u>C</u>	57/09/12
				N/C Close		Date:	

NCR:			WORK ORDER NON-CONFORMANCE (NCR)					
		Description of NC		Corrective Action Section B	Verification	Approval		
DATE	STEP	Section A	Initial Chief Eng	Action Description Chief Eng	Sign & Date	Section C	Chief Eng	Approval QC Inspecto
2.								
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						1	1	

NOTE: Date & initial all entries

Wednesday, 6/6/2007 3:45:44 PM Date: User: Kim Johnston **Process Sheet** Drawing Name: BRACKET ASSEMBLY Customer: CU-DAR001 Dart Helicopters Services Part Number: D3121141 Job Number: 32837 Job Number: Description: Seq. #: Machine Or Operation: SECOND CHECK QC8 5.0 Comment: SECOND CHECK 6.0 D312121 8.0000 Each(s) Comment: Qty.: 1.0000 Each(s)/Unit Total: Pick: Description Batch Qty Part Number 1 D3121-21 J.F./JL 040/4 D3121241 Bearing Assembly 7.0 Comment: Qty.: 1.0000 Each(s)/Unit Total: 8.0000 Each(s) Pick: Description Batch **Qty Part Number** 1 D3121-241 Bearing Ass * R 34 SMALL FAB 8.0 Comment: SMALL & MEDIUM FAB RESOURCE 1 Assemble D3121-141 as per Dwg D3121. INSPECT WORK TO CURRENT STEP 9.0 QC5 Comment: INSPECT WORK TO CURRENT STEP (12) Z. PACKAGING 1 PACKAGING RESOURCE #1 10.0 Comment: PACKAGING RESOURCE #1 Identify and Stock Location: FINAL INSPECTION/W/O RELEASE QC21 11.0 Comment: FINAL INSPECTION/W/O RELEASE Job Completion

Dart Aerospace Ltd

W/O:			WORK ORDER	CHANGES					
DATE	STEP	PRO	OCEDURE CHANGE	I	Зу	Date	Qty	Approval Chief Eng / Prod Mgr	Approva QC Inspecto
	·								
Part No	:	PAR #:	Fault Category:	NCR:	Yes I	No DQ	A:	_ Date: _	
				•	QA: N	C Close	d:	Date:	
			NORK ORDER NON-CON	IFORMANCE (NCR	<u> </u>			

NCR: WORK ORDER NON-CONFORMANCE (NCF								
		Description of NC		Corrective Action Section B			Approval	I
DATE	STEP	Section A			Sign & Date			Approval QC Inspector
·		·						
						1		
				•				
		·						

NOTE: Date & initial all entries

DART AEROSPACE LTD	Work Order:	32831
Description: Bracket	Part Number:	D3121-111
Inspection Dwg: D3121 Rev: D		Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

X First Article Prototype

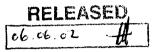
Drawing	Tolerance	Actual	Accept	Reject	Method of	Comments
Dimension	Tolerance	Dimension	Accept	110,000	-Inspection	
Ø0.392	+0.002/-0.000	. 393				,
0.75	+/-0.030	,750	/			
0.375	+/-0.010	-375~		•		
2.14	+/-0.030	2.149				
0.950	+/-0.010	.950				
0.600	+/-0.010	·(d00				
1.96	+/-0.030	1.965				
0.280	+/-0.010	285			•	
3.330	+/-0.010	3.330			•	
3.630	+/-0.010	3.635	/			
R0.25	+/-0.030	1.320				
R0.375	+/-0.010	1.375				
Ø0.201	+0.005/-0.000	- 201 W				
0.100	+/-0.010	100				
6.18	+/-0.030	6-180				
5.89	+/-0.030	5.900				
0.080	+/-0.010	080				
0.300	+/-0.010	301				
30°	+/-0.1°	300				
R0.25	+/-0.030	1-350				
0.130	+/-0.010	131				
		1 - 1				
0.381	+/-0.010	-385	/,			
0.281 0.201	+/-0.010	<u>, 204</u>	<u> </u>			GC
0.400	+/-0.010	397				· · ·
0.580	+/-0.010	. 585				
100°	+/-0.1°	\00°				
D32 0,032	+/-0.010	. O29				G

Measured by:	Audited by:	Inl.	Prototype Approval:	N/A
Date: 07 09 06	Date:	07/04/06	Date:	N/A

Rev	Date	Change	Revised by	Approved
Α	04.01.12	New Issue P/O D3121-141	KJ/RF	
В	04.05.05	Dimensions changed/re-arranged per Dwg revision	KJ/JLM LA	21
С	06.06.14	Dwg Rev. updated	KJ/JLM 🛠	



DESIGN DRAWN BY		l'	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA		
CHEC	(ED)	APPROVED A	DRAWING NO. REV.		
	1 1V	##	D3121 SHEET 1 OF 1		
DATE	-A1-W-1	<u> </u>	TITLE SCAL		
06.0	5.17		BRACKET ASSEMBLY 1:		
Α	_	02.04.15	NEW ISSUE		
В		03.01.16	ADD RIDGES; ADD MAT'L PROP; FIX P/N ADD -141/-143/-144/-145/-146		
С		04.02.17	ADD CLEARANCE; USE -241 BEARING		



_	D3121-21	BOLT	(1)
	D3121-24	-1	
	BEARING A	SSEMB	LY (1)

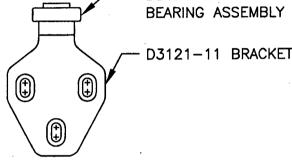
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D3121-041 BRACKET ASSEMBLY

06.05.17

(REPLACES PREMIER P/N B30-23000-33)

D3121-25 CAP WAS 1.024, NOW 1.000

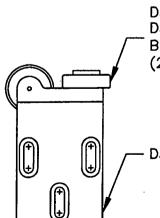


D3121-21 BOLT (1) D3121-241 BEARING ASSEMBLY (1) (2 PLACES)

D3121-13/-14 **BRACKET**

D3121-043 (SHOWN) / D3121-044 (OPPOSITE) BRACKET ASSEMBLY

(REPLACES PREMIER P/N B30-23000-37/-38)



D3121-21 BOLT (1) D3121-241 BEARING ASSEMBLY (1) (2 PLACES)

D3121-15/-16 BRACKET

D3121-045 (SHOWN) / D3121-046 (OPPOSITE) BRACKET ASSEMBLY

(REPLACES PREMIER P/N B30-23000-35/-36)

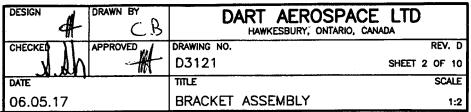
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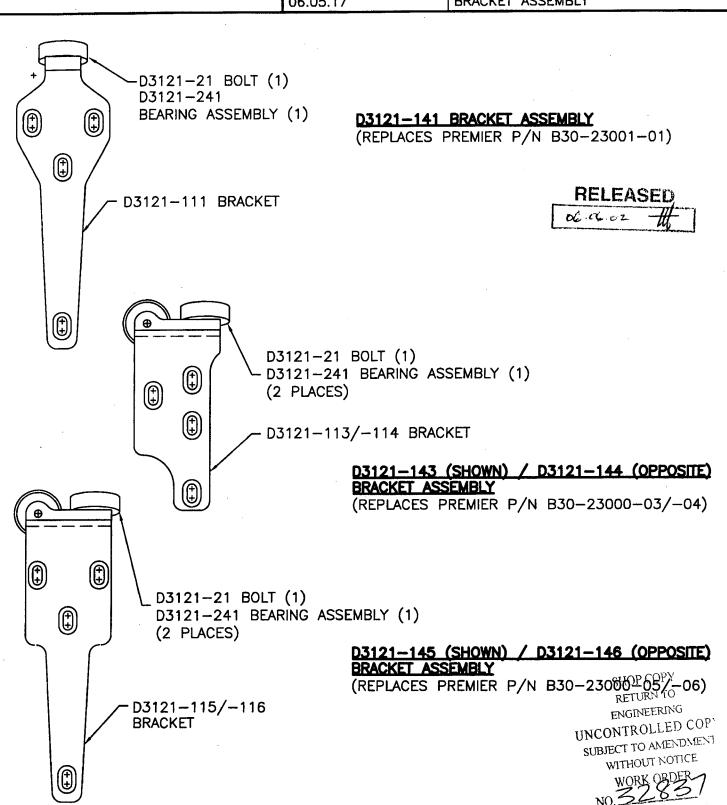
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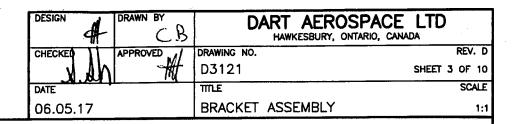




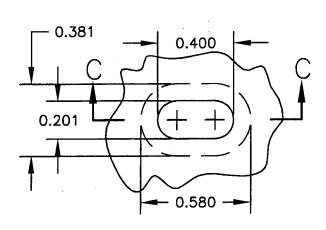


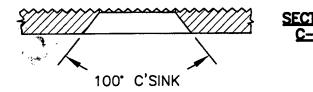
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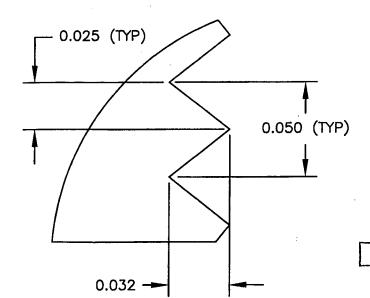








DETAIL B: RIDGE DETAILPARTIAL SECTION SCALE 1:20



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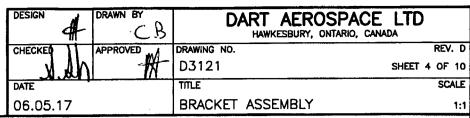
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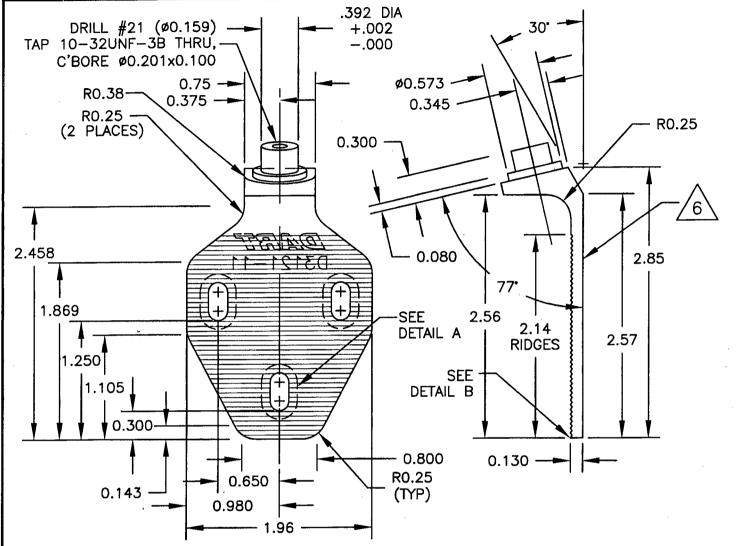
WORK ORDER

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D3121-11 BRACKET

1) MATERIAL: 17-4 SS PER AMS 5604/5643 (REF DART SPEC. M17-4-B)
MIN ULTIMATE TENSILE = 150 ksi
MIN YIELD TENSILE = 100 ksi

2) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED

3) ALL DIMENSIONS ARE IN INCHES

4) BREAK ALL SHARP EDGES 0.005 TO 0.015

5) ENGRAVE DART P/N & LOGO AS SHOWN

6) HOLE IN SPIGOT TO BE CONCENTRIC WITHIN 0.005

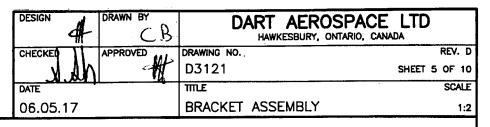
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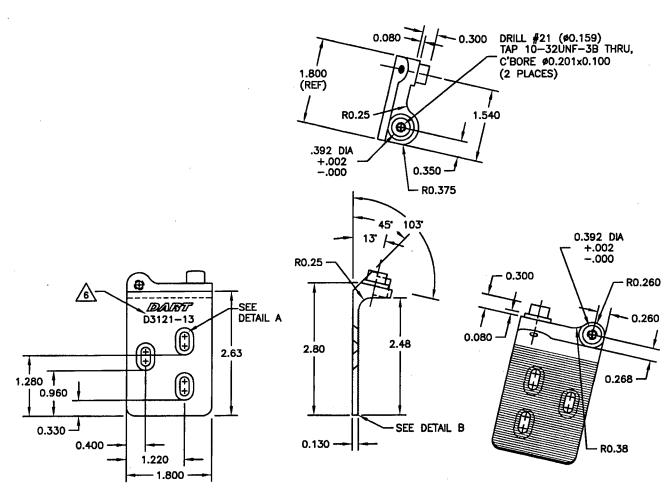
RELEASED

06. de 02

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D3121-13 BRACKET (SHOWN)

1) MATERIAL: 17-4 SS PER AMS 5604/5643 (REF DART SPEC. M17-4-B) UNCONTROLLED COPY
MIN LII TIMATE TENSILE STRENGTH A STRENGTH OF THE STRENGTH OF THE SPEC. MIN ULTIMATE TENSILE STRENGTH = 150 ksi MIN YIELD TENSILE STRENGTH = 100 ksi

- TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 3) ALL DIMENSIONS ARE IN INCHES
- 4) BREAK ALL SHARP EDGES 0.005 TO 0.015
- 5) ENGRAVE DART P/N & LOGO AS SHOWN
- 6) HOLE IN SPIGOT TO BE CONCENTRIC WITHIN 0.005

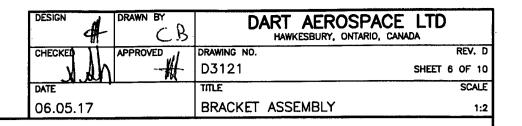
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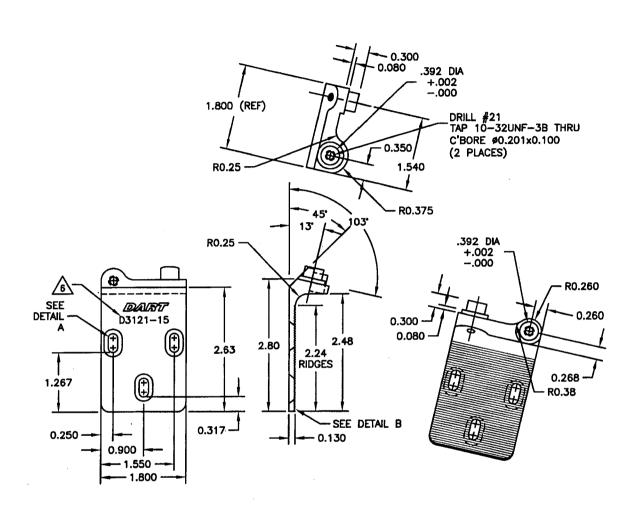
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D3121-15 BRACKET (SHOWN) D3121-16 BRACKET (OPPOSITE)

1) MATERIAL: 17-4 SS PER AMS 5604/5643 (REF DART SPEC. M17-4-B)
MIN ULTIMATE TENSILE = 150 ksi
MIN YIELD TENSILE = 100 ksi

2) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED

- 3) ALL DIMENSIONS ARE IN INCHES
- 4) BREAK ALL SHARP EDGES 0.005 TO 0.015
- 5) ENGRAVE DART P/N AND LOGO AS SHOWN
- 6) HOLE IN SPIGOT TO BE CONCENTRIC WITHIN 0.005

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NO. 22837

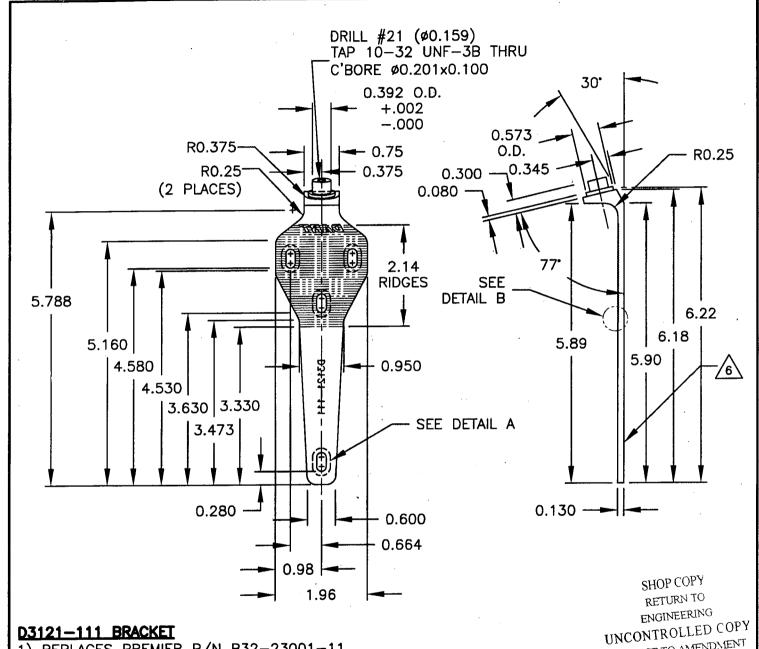
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	DESIGN DRAWN BY		DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA		
	CHECKED	APPROVED AND	DRAWING NO.	REV. D	
	y.Ah	A	D3121	SHEET 7 OF 10	
••	DATE		TITLE	SCALE	
	06.05.17		BRACKET ASSEMBLY	1:2	



D3121-111 BRACKET

1) REPLACES PREMIER P/N B32-23001-11

2) MATERIAL: 17-4 SS PER AMS 5604/5643 (REF DART SPEC. M17-4-B) MIN ULTIMATE TENSILE = 150 ksi

MIN YIELD TENSILE = 100 ksi

3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHEWISE NOTED

- 4) ALL DIMENSIONS ARE IN INCHES
- 5) BREAK ALL SHARP EDGES 0.005 TO 0.015
- 6) ENGRAVE DART P/N & LOGO IN AREAS SHOWN
- 7) HOLE IN SPIGOT TO BE CONCENTRIC WITHIN 0.005

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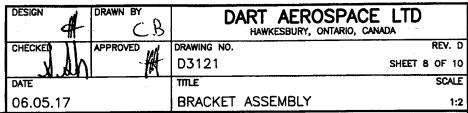
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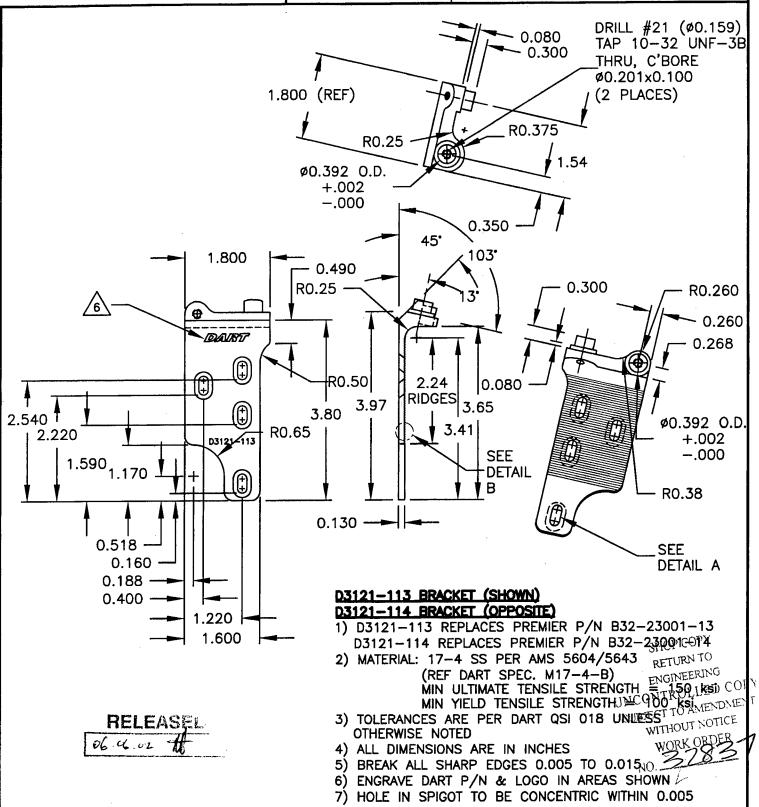
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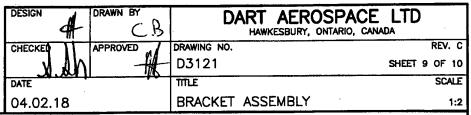


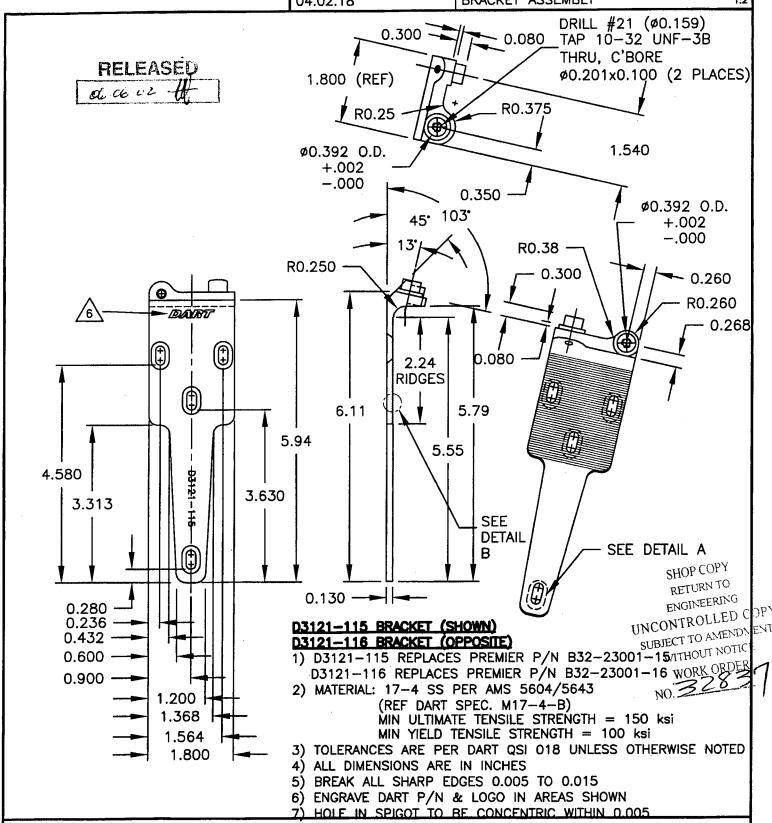




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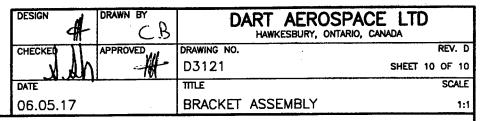


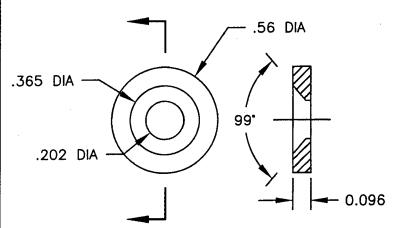




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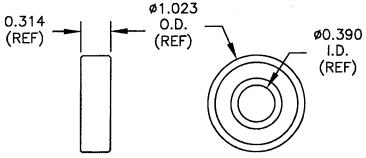






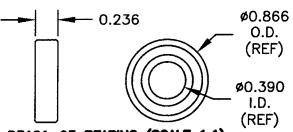
D3121-17 WASHER (SCALE 2:1)

- 1) REPLACES PREMIER P/N B32-23001-17
- 2) MATERIAL: AISI 303 SS ROUND BAR, ANNEALED (REF DART SPEC. M303R)
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) ALL DIMENSIONS ARE IN INCHES
- 5) BREAK ALL SHARP EDGES 0.005 TO 0.015



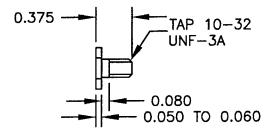
D3121-19 BEARING (SCALE 1:1)

- 1) POSSIBLE SUPPLIER: KING BEARING P/N 6000-2ZJ/EM FAFNIR P/N 9100KDD
- 2) ALL DIMENSIONS ARE IN INCHES



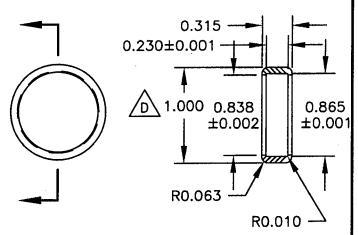
D3121-23 BEARING (SCALE 1:1)

- 1) POSSIBLE SUPPLIER: SKF P/N 61900-2Z OR KML P/N 6900-ZZ
- 2) ALL DIMENSIONS ARE IN INCHES



D3121-21 BOLT (SCALE 1:1)

- 1) MATERIAL: AISI 303 SS HEX, ANNEALED (REF DART SPEC. M303H0.500)
- 2) FINISH: NONE
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) ALL DIMENSIONS ARE IN INCHES
- 5) BREAK ALL SHARP EDGES 0.005 TO 0.015



D3121-25 CAP (SCALE 1:1)

- 1) MATERIAL: DELRIN ROD, Ø1.25
 - (REF DART SPEC. M-DELRIN-R1.250)
- 2) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 3) ALL DIMENSIONS ARE IN INCHES RETURN TO

ENGINEERING

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UN 03M 54 OLL ED COP

SUGART TO AMENDME

WITHOUT NOTICE

WORK ORDER

NO 328

D3121-23

BEARING

D3121-241 BEARING ASSEBLY (SCALE 1:1)

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